DISSERTATION

FOR THE AWARD OF DEGREE

MASTER OF HOSPITAL ADMINISTRATION

SESSION 2022-2024

PATIENT SAFETY WITH REFERENCE TO THE ADVERSE EVENTS ON THE BASIS OF INCIDENT REPORTING AT A PRIVATE TERTIARY CARE HOSPITAL IN NORTH INDIA.

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ABBREVIATIONS

Sr No	Abbreviation	Full form
1.	WHO	World Health Organization
2.	CAPA	Corrective And Preventive Action
3.	RCA	Root Cause Analysis
4.	OT	Operation Theatre
5.	ICU	Intensive Care Unit
6.	NICU	Neonatal Intensive Care Unit
7.	AEFI	Adverse Event Following Immunization
8.	OPD	Out Patient Department
9.	MR Vaccine	Measles- Rubella Vaccine
10.	SE	Sentinel Events
11.	ED	Emergency Department
12.	ENT	Ear Nose Throat
13.	APGAR	Appearance, Pulse, Grimace, Activity, and Respiration
14.	MI	Myocardial Infarction
15.	DVT	Deep Vein Thrombosis
16.	PE	Pulmonary Embolism
17.	CVA	Cerebral Vascular Accident
18.	JCI	Joint Commission International
19.	AEs	Adverse Events
20.	IOM	Institute of Medicine
21	OBD	Occupied Bed Days

INTRODUCTION

INTRODUCTION

Patient safety is a cornerstone of healthcare delivery, encompassing efforts to prevent harm and ensure the well-being of patients during their interaction with healthcare services. It is particularly critical in tertiary care settings where patients often present with complex medical conditions requiring specialized treatment and management. In recent years, the focus on patient safety has intensified globally, spurred by growing recognition of the prevalence and impact of adverse events within healthcare facilities.

Adverse events, defined as unintended injuries or complications resulting from medical care rather than the patient's underlying condition, pose significant challenges to patient safety and quality of care. Incident reporting systems serve as pivotal mechanisms for identifying, documenting, and analyzing adverse events and near misses within healthcare institutions. These systems not only facilitate the immediate management of incidents but also contribute to ongoing quality improvement efforts by uncovering systemic issues and enhancing preventive measures.

In the context of India, a rapidly evolving healthcare landscape characterized by a diverse patient population and varying levels of healthcare infrastructure, the implementation and efficacy of incident reporting systems in tertiary care hospitals are of paramount importance. Private tertiary care hospitals, in particular, play a crucial role in the healthcare ecosystem, often serving as centers of excellence in specialized medical treatment and attracting patients seeking advanced care.

North India, with its mix of urban centers and rural hinterlands, presents a unique backdrop for studying patient safety and adverse events in private tertiary care settings. The region's healthcare facilities face distinctive challenges, including resource constraints, patient volume, and the need for effective governance and regulatory oversight. Understanding the dynamics of patient safety within this context is essential for improving healthcare outcomes and enhancing the overall quality of care delivered.

Patient safety is a fundamental aspect of healthcare delivery, aiming to prevent harm to patients during the course of their medical treatment. Adverse events, defined as incidents that result in unintended harm to the patient, pose a significant challenge to the healthcare system globally. In North India, where healthcare infrastructure is diverse and rapidly evolving, understanding the landscape of patient safety and adverse events is paramount.

An injury related to medical management refers to harm resulting from healthcare processes rather than the underlying disease itself. Medical management encompasses all aspects of patient care, including diagnosis and treatment, failures in diagnosis or treatment, and the systems and equipment used in delivering care. According to the World Health Organization (WHO), adverse events can be either preventable or non-preventable. The Joint Commission International (JCI) defines an adverse event as an unexpected, undesirable, or potentially harmful incident within a healthcare organization.

Patient safety, a cornerstone of quality healthcare, has emerged as a global priority. The World Health Organization (WHO) defines it as "the prevention of errors and harm to patients caused by the care provided to them." While healthcare has witnessed remarkable advancements, the potential for adverse events (AEs) remains a significant concern, particularly in complex settings such as tertiary care hospitals. These institutions, often overseeing critical and complex cases, face heightened challenges in ensuring patient safety. Human errors in complex systems have been debated for decades. In the aviation industry, system failures quickly attract attention and are addressed because accidents, often involving many people and resources, are highly publicized. Similarly, healthcare also experiences accidents and complications, which can be fatal. However, these incidents typically occur individually or in small numbers, making them less dramatic and less visible to the public. It wasn't until the 1990s that healthcare errors began to receive significant attention.

Patient safety is a crucial component of quality care. Healthcare providers face numerous challenges in maintaining patient safety in today's healthcare environment. As a discipline, patient safety applies safety science methods to create a reliable healthcare delivery system. It focuses on minimizing the incidence and impact of adverse events while maximizing recovery from them. In 1999, the Institute of Medicine (IOM) described the healthcare system as fragmented, error-prone, and harmful to safe patient care. They defined patient safety as freedom from accidental injury and emphasized the importance of establishing systems and processes to reduce the likelihood of errors and to catch them when they occur. India, with its burgeoning population and rapid healthcare expansion, is

experiencing a concomitant increase in the number of tertiary care hospitals. While these hospitals offer advanced medical care, they also grapple with the complexities of managing a large patient volume, intricate medical technologies, and a diverse healthcare workforce. This study focuses on a private tertiary care hospital in North India, a region characterized by its unique socio-cultural, economic, and healthcare infrastructure.

The effective recording and reporting of adverse events are vital components of a healthcare institution's risk management and quality assurance processes.

Preventable harm to patients due to their healthcare is never acceptable. While patient safety is mainly a clinical concern, it also represents a significant source of wasted resources.

This research focuses on investigating patient safety within the context of a tertiary care teaching hospital in North India, utilizing incident reporting as a primary tool for analysis. Incident reporting is a systematic method for healthcare professionals to document adverse events, errors, and near misses, providing valuable insights into areas for improvement within the healthcare system.

The chosen tertiary care teaching hospital serves as an ideal setting for this study due to its complexity in patient care, involvement in medical education, and potential for a diverse range of adverse events. By analyzing incident reports within this setting, this research seeks to accomplish several objectives:

Identification of Common Adverse Events: Through the analysis of incident reports, this study aims to identify the most frequent types of adverse events occurring within the hospital. Understanding the nature and prevalence of these events is crucial for developing targeted interventions to mitigate risks.

Root Cause Analysis: Delving deeper into the underlying causes of adverse events is essential for implementing effective preventive measures. By examining the root causes identified in incident reports, this research aims to uncover systemic issues contributing to patient harm, such as communication breakdowns, medication errors, or equipment failures.

Evaluation of Incident Reporting System: Assessing the effectiveness of the incident reporting system itself is integral to improving patient safety. This research will evaluate the comprehensiveness, timeliness, and reliability of incident reporting within the hospital, identifying potential barriers to reporting and opportunities for enhancement.

Recommendations for Improvement: Based on the findings of the study, recommendations will be proposed to enhance patient safety within the tertiary care teaching hospital. These recommendations may include interventions to improve communication among healthcare teams, streamline medication management processes, enhance staff training on error prevention, or implement technological solutions to reduce the occurrence of adverse events.

By focusing on patient safety through the lens of incident reporting, this research endeavors to contribute valuable insights to the ongoing efforts to enhance healthcare

quality and mitigate risks to patients in North India. Ultimately, the findings of this study aim to inform evidence-based strategies for improving patient safety within the tertiary care teaching hospital and serve as a foundation for broader initiatives across the healthcare system.

This introduction sets the stage for exploring the specific dynamics of patient safety and adverse events based on incident reporting at a private tertiary care hospital in North India. By examining incident reports and their implications, this research aims to uncover patterns of adverse events, identify contributing factors, and propose targeted interventions to mitigate risks and enhance patient safety protocols.

The significance of this study lies in its potential to inform policy decisions, guide clinical practices, and foster a culture of safety within healthcare organizations. By leveraging incident reporting data, healthcare providers can proactively address safety concerns, implement evidence-based practices, and ultimately reduce the incidence of adverse events, thereby improving patient outcomes and increasing public trust in healthcare services.

Moreover, the findings of this research are expected to contribute to the broader discourse on patient safety in developing healthcare systems, offering insights that can be adapted and applied across similar contexts nationally and internationally. By promoting transparency, accountability, and continuous improvement, incident reporting serves as a cornerstone of patient-centered care, aligning healthcare practices with the principles of quality, safety, and ethical responsibility.

In conclusion, the exploration of patient safety with reference to adverse events on the basis of incident reporting at a private tertiary care hospital in North India represents a critical endeavor in advancing healthcare quality and safety initiatives. Through rigorous analysis and strategic recommendations, this research endeavors to foster a safer and more resilient healthcare environment, ultimately benefiting patients, healthcare professionals, and society at large.

AIM

&

OBJECTIVES

AIM OF THE STUDY

The aim of this study to:

To study the occurrence of adverse events on the basis of incident reporting in a private tertiary care hospital in North India.

OBJECTIVES OF THE STUDY

- To examine the categories of adverse events.
- To examine the rates of adverse events.
- To suggest recommendations if any to close the gaps.

REVIEW

OF

LITERATURE

REVIEW OF LITERATURE

The literature review is an extensive, systematic selection of potential sources of previous work, which acquaints the investigator with fact-finding work after scrutinization. Polit and Hungler state that the literature review provides readers with a background for understanding the significance of the study.

A review of the literature is a critical step in the research process. A literature review refers to an extensive, exhaustive, and systematic examination of publications relevant to the research project.

Dr. Moonis Mirza [(1)] conducted a study at SKIMS (Sher-I-Kashmir Institute of Medical Sciences) in 2013, focusing on incident reporting and adverse events. Over one year, 253 incidents of adverse events were reported. The majority (87.35%) of incidents involved patient or family dissatisfaction with care received, followed by hospital-acquired infections/sepsis (11.46%), and unexpected deaths due to adverse events (5.13%).

Their analysis revealed that in 38.9% of reported adverse events, the healthcare team was identified as responsible. Additionally, 39% of adverse events were deemed preventable, while 61% were classified as non-preventable based on their investigation.

This study underscores the importance of incident reporting in healthcare settings, highlighting common types of adverse events and their preventability. It emphasizes the

need for targeted interventions and quality improvement efforts to mitigate risks and enhance patient safety.

Arabi Yaseen [(2)], conducted a comprehensive study at an academic tertiary care center in Saudi Arabia, focusing on incident reporting across hospital-wide and intensive care unit (ICU) settings. The primary objective was to analyses incident rates and categories reported over a specific period. In total, 3041 incident reports were submitted across all hospital areas, resulting in an incident rate of 5.8 per 1000 patient days. Within the ICU, 62 incident reports were documented, also yielding a rate of 5.8 per 1000 patient days.

The study identified procedural variances as the most common type of incident reported hospital-wide, accounting for 37% of incidents. Behavior and communication incidents followed closely at 34%, while hazardous and safety incidents accounted for 9.5%, and medication errors for 7.4%. In the ICU, behavior and communication incidents were the most frequently reported at 30.6%, indicating a significant focus area for improvement. Procedural variances accounted for 21% of incidents, while medication errors constituted 13%.

This study highlights the importance of incident reporting systems in identifying and addressing several types of incidents affecting patient safety. It underscores the need for targeted interventions and continuous monitoring to enhance healthcare quality and patient outcomes, partICUlarly in critical care settings like the ICU.

Laxmi Tej Wundavalli [(3)] conducted a study at a tertiary care public sector hospital in Hyderabad, Telangana, the research focused on patient safety incidents over a six-month

period preceding the study. The study excluded events related to the patient's clinical status to maintain focus on operational and procedural incidents. The quantitative aspect of the study involved a population of 1115 permanent employees who had worked at the institution for at least three years. Excluded from the study were residents, nursing students, class IV employees, and security personnel. The required sample size for the study was determined to be 286, based on a margin of error of 5%, a confidence level of 95%, and an assumed response distribution of 50%.

This study aimed to provide insights into patient safety incidents within the hospital, focusing on employees with significant tenure and excluding those whose roles might not directly contribute to patient care or safety incidents. The methodology ensured a representative sample size to draw meaningful conclusions about incident reporting and safety protocols within the hospital setting.

Binkheder S et al (2020) [4] conducted a comprehensive national-level study across 366 hospitals in Saudi Arabia to investigate the intricate relationship between patient safety culture and reported safety events (SEs). The study metICUlously assessed various domains of patient safety culture within these hospitals, revealing significant insights into strengths and areas for improvement.

Among the patient safety culture domains evaluated, "Teamwork Within Units" emerged with the highest positive score at 80.65%, indicating robust collaborative practices among healthcare teams. This highlights a cohesive approach within hospital units, essential for effective patient care and safety. Similarly, "Organizational Learning-

Continuous Improvement" scored notably high at 80.33%, underscoring a culture that values ongoing learning and adaptive practices to enhance patient safety standards.

Conversely, challenges were evident in domains such as "Staffing," which scored at a lower 32.10%, pointing to potential issues related to staffing levels impacting patient care delivery and safety outcomes. Additionally, "Nonpunitive Response to Error" scored markedly low at 26.19%, suggesting room for improvement in fostering a supportive environment that encourages transparent reporting and learning from mistakes without fear of punitive measures.

In terms of reported safety events (SEs) across 103 hospitals included in the study, "Communication and Information" emerged as the most frequently reported contributory factor, accounting for 63.20% of SEs. This highlights critical challenges in communication practices within healthcare settings, which can significantly influence patient safety outcomes. Furthermore, "Staff Competency and Performance" contributed to 61.04% of reported SEs, emphasizing the pivotal role of ensuring continuous training and maintaining lofty standards of performance among healthcare professionals to mitigate risks.

Overall, Binkheder S's study provides valuable insights into the strengths and areas for improvement in patient safety culture across Saudi hospitals. The findings underscore the importance of fostering strong teamwork, promoting organizational learning, addressing staffing challenges, and cultivating a supportive culture of error reporting and continuous improvement to enhance patient safety outcomes effectively.

RM Wilson et al [5] conducted a comprehensive study encompassing 26 hospitals across eight developing and transitional countries, aiming to examine the frequency and characteristics of adverse events affecting patients in these healthcare settings. The study analyzed a substantial dataset, reviewing 15,548 patient records to assess the prevalence and nature of adverse events.

The findings revealed that 8.2% of the patient records reviewed documented at least one adverse event, with varying prevalence rates ranging from 2.5% to 18.4% across different countries. Importantly, a considerable proportion of these events, amounting to 83%, were deemed preventable, indicating substantial opportunities for improving patient safety through targeted interventions and quality improvement initiatives.

Among the adverse events identified, approximately 30% were associated with patient mortality, underscoring the severe consequences of preventable errors in healthcare delivery. Therapeutic errors in relatively uncomplicated clinical scenarios accounted for 34% of the adverse events reported, highlighting areas where enhanced training, supervision, and adherence to clinical protocols are crucial for reducing risks.

The study identified inadequate training and supervision of clinical staff, along with failures to adhere to established policies and protocols, as predominant contributors to adverse events. These findings emphasize the critical need for strengthening healthcare systems in developing and transitional economies to enhance patient safety standards effectively. By addressing these systemic challenges, healthcare providers can mitigate

risks, improve patient outcomes, and foster a culture of safety conducive to delivering high-quality care in resource-constrained settings.

Ruhollah Zaboli et al [6], conducted a focused study involving 20 healthcare personnel from medicine and nursing fields in Tehran's military hospital emergency department. The study aimed to investigate the influencing factors contributing to sentinel events and propose effective solutions to mitigate their occurrence. The research identified four main themes encompassing sentinel events: causes, incidence barriers, cause prevention solutions, and improvement strategies for barriers. These themes provided a structured framework for understanding the complexities surrounding sentinel events in the emergency department context.

Moreover, the study highlighted several critical factors influencing these themes, including staff and patient education, communication effectiveness, thorough assessment practices, patient and companion dynamics, employee rights awareness, leadership qualities, continuity of care considerations, human factors such as workload and fatigue management, physical environment conditions, information management systems, and safe medication use practices.

By exploring these multifaceted aspects, the study aimed to uncover root causes of sentinel events and propose targeted interventions to enhance patient safety and quality of care in the emergency department setting. The findings underscored the importance of comprehensive approaches addressing both systemic and human factors to prevent adverse events and improve overall healthcare delivery.

Sue M Evans [7] conducted a study across 10 intervention and 10 control units in major cities and regional hospitals of South Australia. The study evaluated the effectiveness of an intervention package designed to enhance incident reporting rates and diversify the types of incidents reported among medical and nursing staff.

The intervention package included intensive education sessions, expanded reporting options, changes in report management protocols, and enhanced feedback mechanisms. Results demonstrated significant improvements in incident reporting rates within inpatient areas, with an additional 60.3 reports per 10,000 occupied bed days (OBDs) and in emergency departments (EDs), with an additional 39.5 reports per 10,000 ED attendances.

The study further highlighted shifts in reporting patterns, showing increased reports by doctors in EDs (additional 9.5 reports per 10,000 ED attendances) and nurses in inpatient areas (additional 59.0 reports per 10,000 OBDs). Notably, anonymous reporting also saw a substantial increase, contributing an additional 20.2 reports per 10,000 OBDs and ED attendances combined.

These findings underscored the effectiveness of the intervention package in promoting a culture of safety and transparency among healthcare professionals. By encouraging more comprehensive reporting and addressing barriers to reporting, the study aimed to foster continuous learning, improve incident management, and ultimately enhance patient safety across diverse healthcare settings in South Australia.

Talal A. Al-Ahmadi's [8] 2008 encompassed a comprehensive evaluation conducted across nine public hospitals and two private hospitals over a six-month period. The study focused on assessing various dimensions of safety culture within these healthcare settings, aiming to identify strengths and areas requiring improvement to enhance patient safety and healthcare quality. Among the dimensions of safety culture examined, organizational learning emerged with the highest positive response rate at 75.9%. This finding underscores a prevalent culture of continuous learning and improvement within the hospitals, reflecting efforts to adapt and evolve practices to enhance patient care outcomes.

Conversely, the dimension receiving the lowest positive response rate was non-punitive response to error, registering at 21.1%. This highlights a significant area of concern where healthcare professionals may perceive punitive measures or blame associated with reporting errors, potentially hindering a culture of openness and transparency crucial for learning from mistakes. Key areas identified for improvement in public hospitals included handoffs and transitions, emphasizing the need for standardized processes to ensure seamless continuity of care and reduce risks associated with communication breakdowns. Communication openness was also highlighted as critical, suggesting the importance of fostering environments where healthcare teams can freely communicate concerns and information to prevent errors.

Staffing levels emerged as another crucial area requiring attention, indicating potential challenges in resource allocation and workforce management that could impact patient

care quality and safety. Addressing staffing issues could help mitigate risks associated with workload and ensure adequate support for patient needs.

Overall, Talal A. Al-Ahmadi's study provides valuable insights into the strengths and challenges within hospital safety cultures, emphasizing the importance of enhancing organizational learning, fostering non-punitive approaches to error reporting, improving handoffs and communication practices, and addressing staffing concerns. These findings underscore the need for targeted interventions and continuous quality improvement efforts to promote a safer healthcare environment and optimize patient outcomes effectively.

Annica Ohrn [9] conducted a study focusing on 113 patients who experienced deaths or serious injuries between 1996 and 2003, analyzing claims data to investigate sentinel events reported to the National Board of Health and Welfare. The study aimed to identify patterns and characteristics of these events, shedding light on their implications for patient safety and healthcare quality. Among the 113 patients included in the study, 25 deaths and 88 cases of serious injuries were documented, categorized by disability severity. Specifically, 37 patients suffered disabilities exceeding 30%, while 51 patients had disabilities ranging from 16% to 30%. Notably, 23 of these cases (20%) were reported by chief medical officers as sentinel events, highlighting their significance in terms of severity and impact on patient outcomes.

The study identified orthopedic surgery as the specialty most frequently associated with adverse events, with orthopedic injuries notably resulting in more severe

consequences compared to other specialties. Interestingly, none of the patient injuries caused by infections were reported as sentinel events, indicating potential gaps in the recognition and reporting of certain types of adverse events in clinical practice.

An analysis of contributing factors revealed that individual errors were more prevalent in cases reported as sentinel events, underscoring the role of human factors and individual performance in patient safety incidents. This finding underscores the importance of targeted interventions and systemic improvements to mitigate risks associated with human error in healthcare settings.

Overall, Annica Ohrn et al.'s study provides valuable insights into the prevalence, types, and reporting of sentinel events in healthcare, emphasizing the need for robust reporting systems, thorough incident analysis, and initiative-taking measures to enhance patient safety and prevent adverse outcomes in clinical practice. The findings underscore the importance of continuous quality improvement efforts and comprehensive strategies to address identified vulnerabilities in patient care delivery. This study contributes significantly to the understanding of sentinel events and their implications for healthcare quality and patient safety, highlighting areas for targeted interventions and improvements in clinical practice.

Ravi Sachan [(10)] conducted a prospective observational study focusing on children attending the Pediatrics OPD for their first dose of the MR vaccine between 9 to 12 months of age. The study aimed to monitor and document adverse events following immunization (AEFIs) through a structured telephonic survey.

Initially, demographic details of children receiving the first dose of the MR vaccine were recorded in a case record form at the hospital's immunization clinic. Subsequently, a telephonic survey was conducted on both day 7 and day 30 post-vaccination to assess any reported AEFIs. A total of 278 children were enrolled in the study, with 7 children unavailable for the follow-up telephone survey. Among the respondents, 42 AEFIs were reported, resulting in an overall incidence rate of 15.5%. The majority of these events, 39 cases (94%), occurred within the first 7 days post-vaccination, with the remaining 3 cases (6%) occurring between days 8 to 30 post-vaccination. The most frequently reported AEFI was fever, accounting for 38% of cases, followed by upper respiratory tract infections (30.9%), local swelling at the injection site (26.1%), and skin rash (4%).

This study provides valuable insights into the prevalence and nature of AEFIs following the MR vaccine in young children, highlighting the importance of systematic monitoring and follow-up in vaccine safety assessment. The findings underscore the need for continued surveillance and management of adverse reactions to vaccines to ensure public confidence and optimize immunization program effectiveness.

Teryl K Nuckols et al [(11)], conducted a comprehensive study involving 16,575 randomly selected hospitalized patients across an academic and a community hospital in the US in 2001. The study aimed to characterize incidents reported through established voluntary hospital reporting systems, shedding light on incident rates, types, preventability, and reporting dynamics. The findings revealed that 9% of the hospitalized patients experienced at least one reported incident, highlighting the prevalence of safety events

in hospital settings. Incident rates were reported at 17 incidents per 1000 patient-days, indicating a notable frequency of incidents during hospital stays.

Nurses were responsible for filing the majority of incident reports, accounting for 89% of submissions, while physicians contributed minimally with 1.9%, and other providers accounted for 8.9% of reports. The most frequently reported incident types included medication incidents (29%), falls (14%), operative incidents (15%), and miscellaneous incidents (16%).

Of partICUlar concern was the finding that 59% of reported incidents were deemed preventable, underscoring opportunities for improving patient safety through enhanced protocols and practices. However, preventability remained unclear for 32% of incidents, highlighting the complexities in assessing and addressing all potential risks.

Further analysis revealed that among potentially preventable incidents, nurses participated in 43%, physicians in 16%, and other providers in 19% of cases. This breakdown emphasized the shared responsibility among healthcare providers in ensuring safe patient care practices.

Overall, the study provided valuable insights into the nature of incidents occurring in hospital settings, the roles of different healthcare professionals in incident reporting, and the preventability of these events. These findings underscored the importance of robust reporting systems and continuous quality improvement efforts to enhance patient safety outcomes in hospital environments.

This study by Teryl K Nuckols et al. contributes significantly to understanding incident reporting dynamics and the types of incidents that warrant attention for preventive measures and improved patient care practices.

Fayaz Ahmad Sofi [12] conducted a study in 2013, at SKIMS (Sheri Kashmir Institute of Medical Sciences), which reported a total of 253 adverse events over a one-year period. Among these incidents, patient or family dissatisfaction with care received was the most frequently reported issue, accounting for 221 incidents (87.35% of the total). Hospital-acquired infections or cases of sepsis followed, with 29 incidents reported (11.46%). Unexpected deaths attributed to adverse events constituted 13 incidents (5.13%).

Analysis of the reported adverse events revealed that in 38.9% of cases, the healthcare team was identified as responsible for causing the adverse events. Furthermore, 39% of the adverse events were deemed preventable, indicating that targeted interventions could potentially have averted these incidents. Conversely, 61% of the adverse events were classified as non-preventable, suggesting underlying complexities or unavoidable factors contributing to these occurrences.

This study underscores the importance of incident reporting in healthcare settings like SKIMS, where systematic documentation and analysis of adverse events are essential for improving patient safety and care outcomes. Identifying patterns and root causes of adverse events allows for the implementation of targeted interventions aimed at reducing risks and enhancing the overall quality of healthcare delivery. By categorizing adverse events based on preventability and causative factors, healthcare institutions can

prioritize resources towards preventive measures and educational initiatives that mitigate risks and improve patient outcomes.

Moreover, the findings from this study contribute valuable insights into the dynamics of patient safety within SKIMS and similar healthcare environments. They highlight the need for ongoing monitoring and evaluation of healthcare practices to ensure adherence to best practices and regulatory standards. By promoting a culture of safety and accountability among healthcare professionals, incident reporting systems play a crucial role in fostering transparency and continuous improvement in patient care.

In conclusion, the study conducted at SKIMS in 2013 provides a comprehensive overview of adverse events reported within the institution, shedding light on prevalent issues such as patient dissatisfaction, hospital-acquired infections, and unexpected deaths. The categorization of adverse events by preventability and responsibility offers actionable insights for healthcare administrators and policymakers to strengthen patient safety initiatives and enhance the overall quality of healthcare delivery at SKIMS and beyond. Continued research and vigilance in incident reporting are essential to achieving sustainable improvements in patient safety and healthcare outcomes.

Radha Kumari [13] 2022, This study focuses on incident reporting practices within a multispecialty tertiary care hospital spanning the years 2019 and 2020. It encompasses all types of incidents, including near-misses, no harm events, adverse events, and sentinel events, gathered from various departments and categories of staff throughout the healthcare organization. Incident reporting is standardized using an "Incident

Reporting Form," with reports reviewed quarterly based on the incident's nature or type. The analysis is conducted using an "Incident Analysis Form," which facilitates a structured approach to understanding incident patterns and contributing factors.

There are stringent periods for reporting incidents: near-misses, no harm, and adverse events must be reported within 24 hours, while sentinel events require immediate reporting within 2 hours of occurrence. This rapid reporting period ensures prompt attention and intervention for critical incidents.

Following incident reporting, Root Cause Analysis (RCA) and Corrective and Preventive Actions (CAPA) are conducted promptly by the Quality Team. For sentinel events, RCA and CAPA are initiated immediately, while for other events, these analyses are completed within 24 hours. This initiative-taking approach aims to identify underlying causes, implement necessary corrective measures, and prevent recurrence of similar incidents.

Overall, this study underscores the hospital's commitment to a robust incident reporting and analysis framework, emphasizing timely reporting, thorough analysis through RCA, and effective implementation of CAPA to enhance patient safety and quality of care across all departments. The structured approach ensures that lessons learned from incidents contribute to continuous improvement in healthcare delivery and patient outcomes within the hospital.

V. Aggarwal [(14)] conducted a descriptive cross-sectional study spanning from April to August 2013, aiming to assess and formulate patient identification policies in tertiary

care hospitals. The study included a diverse study population comprising doctors, nursing personnel, paramedical staff, and quality managers from one public and two private hospitals. Initially, a checklist was developed based on an extensive literature review and subsequently refined through expert validation by quality assurance specialists from NABH accredited private hospitals. This checklist served as the framework for interactions with the study population to gather insights and perspectives.

A total of 100 individuals, including doctors, nurses, paramedical staff, and quality managers, were approached for interaction using the checklist as a guide. The response rate was 61%, with 17 doctors, 20 nurses, 21 quality managers, and 11 paramedical staff participating in the study.

Based on the responses received during these interactions, a patient identification policy was formulated. The policy development process integrated inputs and recommendations gathered from the study participants, ensuring that diverse perspectives and expertise were considered in shaping effective patient identification protocols. Overall, V. Aggarwal's study exemplifies a systematic approach to policy development in healthcare settings, emphasizing evidence-based practices and stakeholder engagement. By leveraging expert validation and direct input from frontline healthcare professionals, the study aimed to enhance patient safety and quality of care through standardized patient identification practices across public and private tertiary care hospitals.

OPERATIONAL DEFINITION

Patient Safety: The study refers to the prevention of errors and adverse effects to patients associated with health care.

Adverse event: An event in which care resulted in an undesirable clinical outcome-an outcome not caused by underlying disease-that prolonged the patient stay, caused permanent patient harm, required life-saving intervention, or contributed to death.

Tertiary care: a study refers to the specialized care delivered in a hospital or similar care setting. It usually requires a referral from a primary or secondary care provider, and it is typically only available at specialized medical centers.

MATERIAL

&

METHODS

MATERIAL & METHODS

Study Design: This is an observational, cross-sectional, descriptive study.

Place Of Study: SJM Super Speciality Hospital, Noida

Sample Size: All the inpatients admitted in the year 2023.

Time Period: The study is undertaken for a duration of 1 Year.

Inclusion Criteria:

• Only inpatients for the year 2023 are subjected to study.

Exclusion Criteria:

• The patients who do not fulfil the inclusion criteria of the study.

Data collection process:

• All incidents' reports submitted through the paper- based reporting system in the hospital for the year 2023.

• Incidents reported by the patients themselves, or by the attendants or staff to the Medical Director's office.

• To study the adverse events, a structured questionnaire on patient safety is used.

• Medical records of the concerned patient are reviewed for all the incidents reported along with the patient or staff interview when reported.

RESULTS

RESULTS

1. Data Analysis

The study investigated the frequency, types, and preventability of adverse events occurring at a private tertiary care hospital in North India. Adverse events were defined as unintended injuries or complications that resulted in prolonged hospital stay, disability at the time of discharge, or death, and were caused by healthcare management rather than the underlying disease. The data collected from 92 sampled cases provided a comprehensive view of the various adverse events that occurred within the hospital setting.

A total of 92 incidents of adverse events were reported, which mainly came from general medicine (29 i.e. 31.5%) (With respect to total admission in general medicine specialty during the study period i.e. 893, incident reported constitutes 3%) followed by General surgery (7 i.e. 7.0%) (With respect to total admission in General surgery specialty during the study period i.e. 126, incident reported constitutes 6%). Incidents reported in orthopaedics were 3 i.e. 3.26% of all incidents reported (With respect to total admission in orthopaedics specialty during the study period i.e. 174, incident reported constitutes 2.0%). Most common age group involved was 21 & above (50%) with male dominance (58%) who came from elective admission (63%) and the duration of stay was 0-10 days (63%) (Figure 1, Table 1 & 2).

Specialty	Incidents reported	Specialty- wise total admissions	%
General medicine	29	893	3%
General surgery	7	126	6%
Orthopaedics	3	174	2%
Plastic surgery	1	9	11%
Neurology	0	1	0%
Pulmonology	0	21	0%
ENT	1	24	4%
Maxillofacial	0	8	0%
Oncology	0	1	0%
Paediatrics	5	295	2%
Urology	0	5	0%
Gyane-Obs	26	739	4%
Oncology	0	4	0%

Table 1: Specialty-wise incidents reported with respect to total admissions.

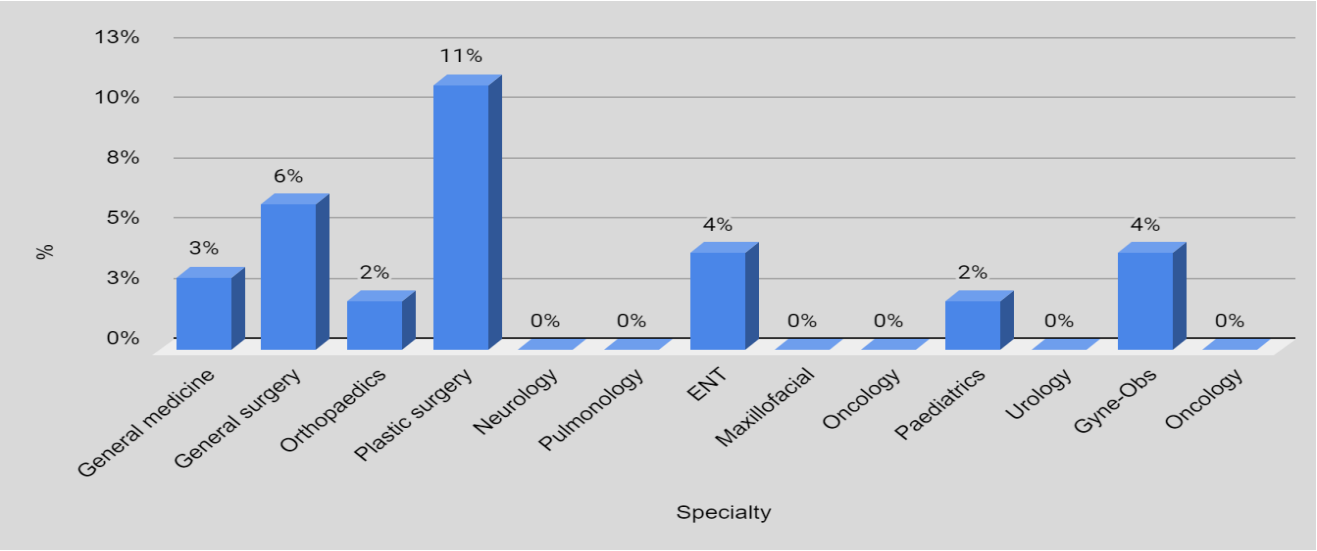

Figure 1: Percentage of incidents reported in different specialties.

Characteristic	Variable	Frequency (n)	Percentage (%)
Age (years)	0-20	4	4%
	21-40	46	50%
	41-60	13	14%
	61-above	9	10%
Gender	Male	53	58%
	Female	20	22%
Type of admission	Elective admission	58	63%
	Emergency admission	12	13%
Duration of stay	0-10 Days	58	63%
	11-20 days	10	11%

Table 2: Profile of patients with Adverse Events by incidents reporting.

Among the total 92 incidents reported, Patient/family dissatisfaction with care received, documented or expressed during the current admission was the most common incident reported (22 incidents i.e. 24 %). It was followed by hospital acquired infection/sepsis (13 incidents i.e. 14%). 17 incidents (5.13%) were reported for patient care delayed or lesser treatment. (Table 3).

Questions	No.	(%)
Q1. During the last 12 months, any unplanned ward admission related to any given healthcare for the same health condition?	3	3%
Q2. Hospital-incurred patient accident or injury?	8	9%
Q3. Adverse drug reaction/drug error or related to administration of fluids or blood	9	10%
Q4. Hospital acquired infection/sepsis	13	14%
Q5. Unplanned removal, injury or repair of organ or structure during surgery, invasive procedure or vaginal delivery?	1	1%
Q6. Unplanned return from operation theatre?	0	0%
Q7. Unplanned open surgery following closed or laparoscopic surgery?	0	0%
Q8. Cardiac/respiratory arrest, low APGAR score?	0	0%
Q9. Development of neurological deficit not present on admission?	0	0%
Q10. Injury or complications related to termination of pregnancy or labor and delivery including neonatal complications?	0	0%
Q11. Other patient complications including MI, DVT, PE, CVA etc.?	0	0%
Q12. Patient/family dissatisfaction with care received documented or expressed during the current admission?	22	24%
Q13. Unplanned transfer from general care to intensive care higher dependency?	7	8%
Q14. Unplanned transfer to another care hospital? Acute	0	0%
Q15. Unexpected death (i.e. not an expected outcome of the disease during hospitalization)?	0	0%
Q16. Patients care delayed or lesser treatment given because the patient was unable to pay?	17	18%
Q17. Admission significantly prolonged compared to the expected length for this clinical condition?	0	0%
Q18. Any other undesirable outcomes (not covered by any of the above)?	12	13%

Table 3: Frequency of adverse events in incidents reported.

A total of 57 RF2 forms were filled for adverse event reported in which 16 (28.0%) were filled for general medicine and 21 (36.8%) for Obstetrics & Gynecology (Figure-2).

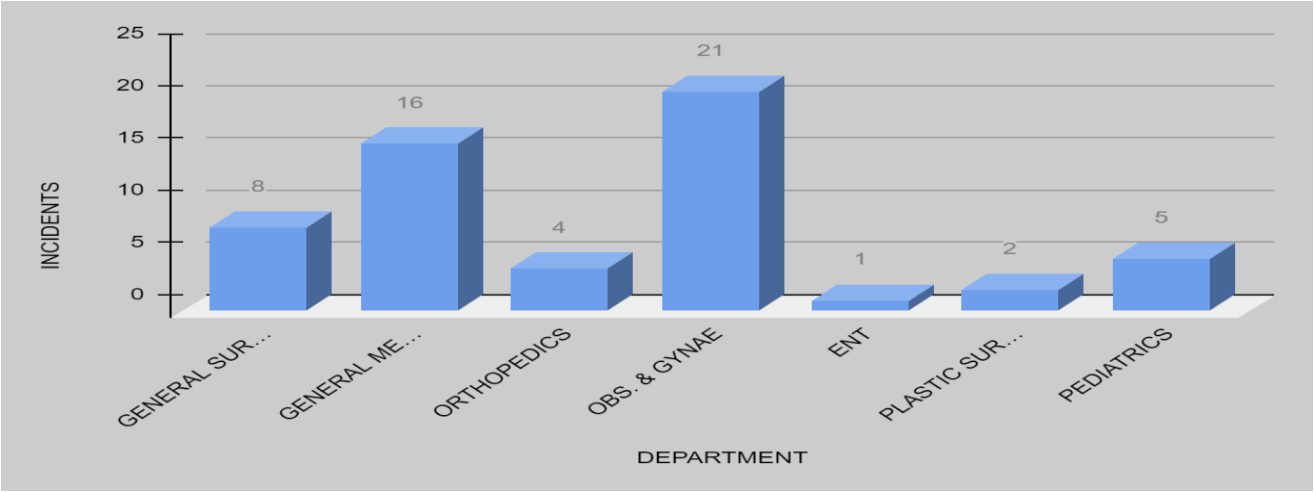

Figure 2- Specialty wise adverse events studied among incidents reported

35% of incidents were reported by patient and their attendants. Only 33.3% of incidents were reported by treating doctors and 22.8% incidents were reported by the head nurse. These incidents were further studied by reviewing their medical and nursing records (Fig. 3)

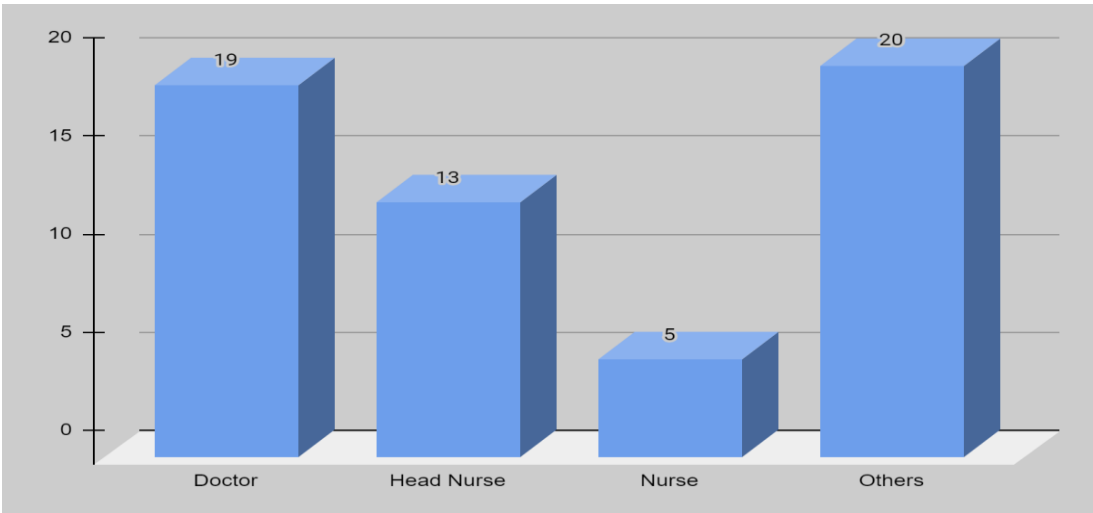

Figure 3: Source of information of incidents reported.

Out of total 57 adverse events studied through RF2 only 30 (52.6%) presented with untoward outcome with 5 (8.77%) causing admission in wards and 22 (38.5%) causing prolonged stay (Figure 4 and Table 4).

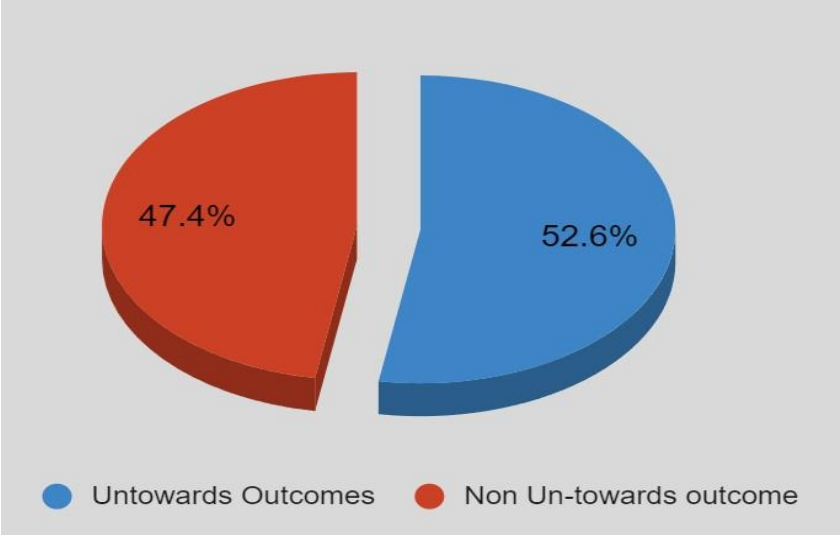

Figure 4: Adverse event presenting with untoward outcome among incidents reported

Outcome	No.
Adverse event causing admission in ward	5
Adverse event associated with death	0
Adverse event associated with disability at discharge	0
Adverse event associated with prolonged stay	22
Total untoward out come	30

Table 4: Table showing implication of adverse event on untoward outcome among incidents reported.

40 (70.2%) of reported adverse events studied through RF2 form showed signs of health care team responsible for causing adverse events. 17(29.8%) of healthcare team not responsible for causing adverse events (Table 6 & Figure 5).

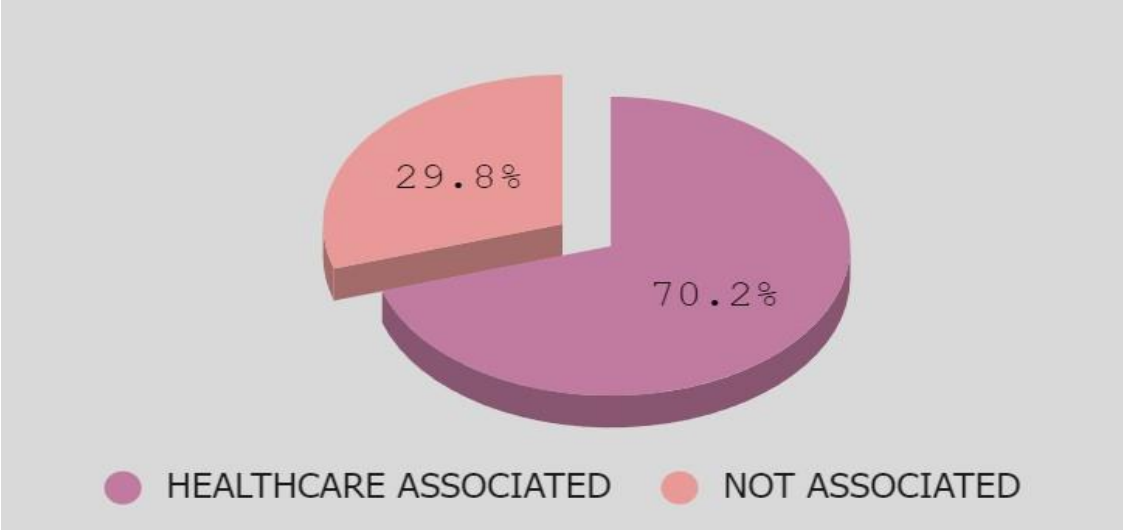

Figure 5: Cases having evidence that healthcare team caused adverse event in incidents reported

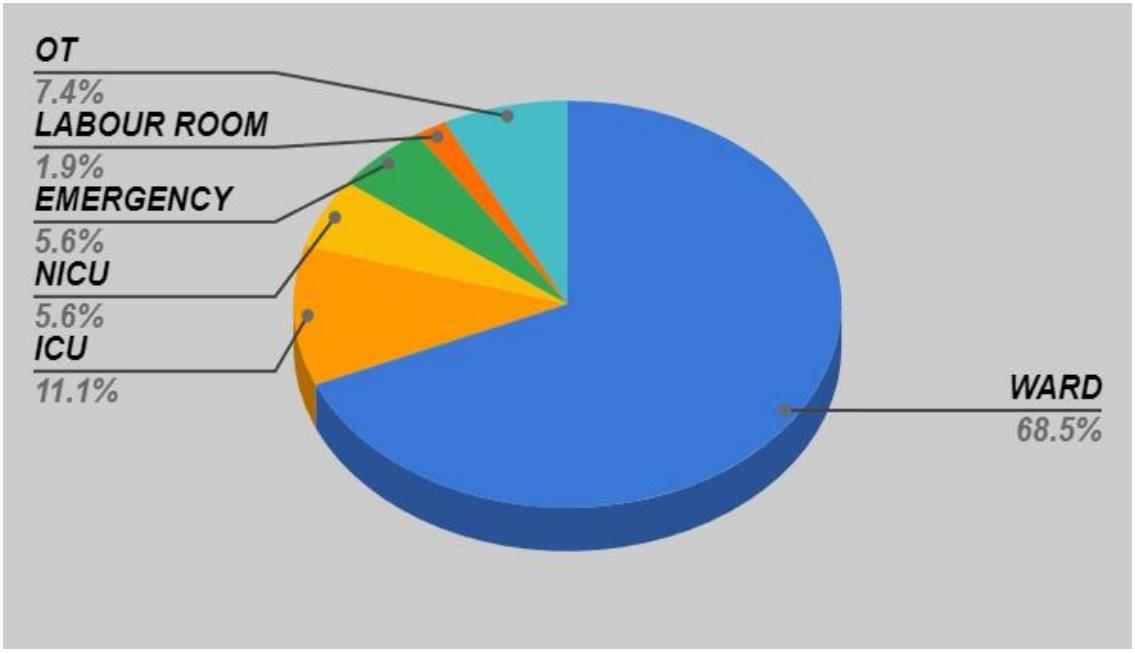

Figure 6: Exact location of adverse event at hospital among Incidents reported

Column1	Preventive & prophylaxis	Diagnostic	Therapeutic	Rehabilitation
General medicine	8	2	6	0
General surgery	5	3	0	0
Orthopedics	2	2	0	0
Plastic surgery	2	0	0	0
Pediatrics	3	0	2	0
Gyane-Obs	17	2	2	0
ENT	1	0	0	0

Table 5: Table showing type of care related to adverse event among incidents reported.

Confidence Score	Frequency
Virtually no evidence for preventability	16%
Slight to modest evidence for preventability	18%
Preventability not really likely; less than 50-50	18%
Preventability more likely than not; more than 50-50	19%
Strong evidence for preventability	18%
Definite certain evidence for preventability	12%

Table 6: Table showing confidence Score of preventability among adverse event in incidents reported.

Out of 57 Adverse Event showing signs of health care team responsible for causing adverse events which could have been prevented among incidents reported, 10 (17.5%) of adverse events were related to therapeutic care of patient mainly, followed by the 9(15.7%) diagnostic care mainly (Table 5 & Table 6).

39 (68.4%) of adverse events studies were found preventable and 18 (31.6%) of adverse event was found non-preventable. Preventability more likely than 50-50 was seen in 19% of adverse events. Definite certain evidence for preventability was seen in 12% of adverse events and virtually no evidence for preventability was seen in 16.0% of adverse events occurred. The most common confidence score of preventability came to be 4 i.e. virtually no evidence for preventability (Figure 7 & Table 6).

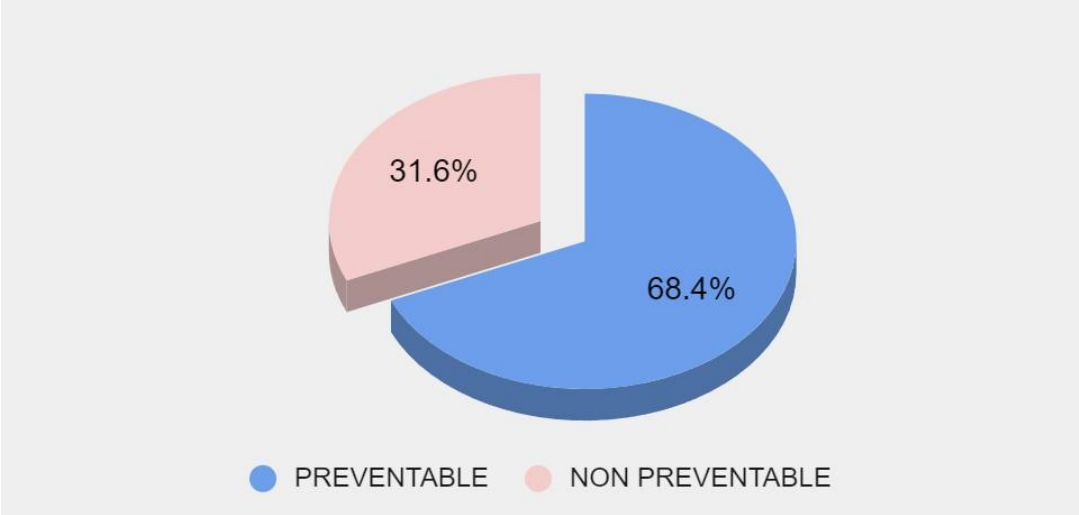

Figure 7: Overall preventability of adverse events among incidents reported.

DISCUSSION

DISCUSSION

As per our study the majority of the incidents were reported in the General Medicine ward followed by Obstetrics and Gynecology ward. Most common age group reported was 21 years & above. The majority of the respondents were male. There were more number of reported incidents from elective admissions as compared to emergency admission. As per the study by ***Moonis Mirza et al*** majority of the respondents were female with age group of 61 years and above. The most common incidents reported by the patients came from emergency admission.

In our study, the patient/family dissatisfaction with care received, was the most common incident reported (24%) followed by hospital acquired infection/sepsis (14%). In contrast to our study other study analysis indicates, hospital-incurred patient accident or injury (2.37%), medication errors (4.35%), procedural variances (4.35%), patient care delayed or lesser treatment (8.3%) given were most common incidents reported.

As per the study ***Arabi Yaseen et al***, the most common incident reported were procedural variances with 37% and behavioral and communication incident with 34% followed by hazardous and safety incidents with 9.5%. As the study conducted by ***Moonis Mirza et al*** the most frequent incidents were patient dissatisfaction with 87.35% followed by hospital acquired infection with 11.6%.

In our study incidents were mainly reported by patient and their attendants, followed by the treating physician and nursing staff. In our study nurses, allied health professionals and doctors were the persons reporting any adverse event happening to a patient.

In our study adverse events presented with untoward outcome, with 52.6% and non untoward outcome with 47.4%. Out of total 57 adverse events studied through RF2 only 30 (52.6%) presented with untoward outcome with 5 (8.77%) causing admission in wards and 22 (38.5%) causing admission in wards. Similarly in the study conducted by ***Moonis Mirza et al*** untoward outcome presented as death or permanent loss of function, permanent loosening of function, additional surgery or increased length of stay.

In our study 40 (70.2%) of reported adverse events studied through RF2 form showed signs of health care team responsible for causing adverse events and 17(29.8%) of adverse events. Out of the total adverse events 39(68.4%) could have been prevented and 19(31.6%) were not supposed to be prevented. 17.5% of adverse events were related to therapeutic care of patient mainly, followed by the 15.7% diagnostic care mainly.

In our study, 70.2% of adverse events were found preventable and 29.8% of adverse event were found non- preventable. Other studies conducted by ***Moonis Mirza et al*** showed higher rate of non-preventability of adverse events as compared to our study.

CONCLUSION

CONCLUSION

The study at a private tertiary care hospital in North India provided critical insights into the frequency, types, and preventability of adverse events. Analyzing 92 sampled cases revealed that 57 adverse events occurred, with a preventability rate of 70.2%. Therapeutic care exhibited a higher preventability rate (17.5%) compared to diagnostic care (15.7%), indicating significant opportunities for improvement in treatment procedures and protocols. The findings also highlighted that adverse event leading to admission in ward and prolonged hospital stays had the highest preventability rates, underscoring the urgent need for targeted interventions in these areas. Overall, the study emphasizes the critical role of systematic improvements and enhanced care practices in reducing adverse events and improving patient outcomes.

Importance of Implementing Patient Safety Protocols

Implementing robust patient safety protocols is paramount in healthcare settings, partICUlarly in hospitals where the risk of adverse events is inherently high. Effective safety protocols can significantly mitigate the risk of harm to patients by establishing standardized procedures for various medical practices. For instance, surgical safety checklists, electronic prescribing systems, and infection control measures can prevent common adverse events such as surgical errors, medication mistakes, and hospital-acquired infections. Moreover, a culture that encourages incident reporting and

continuous monitoring can help identify and address potential risks before they result in harm. The World Health Organization (WHO) emphasizes that enhancing patient safety not only improves patient outcomes but also reduces healthcare costs associated with prolonged hospital stays and additional treatments (WHO, 2010). By prioritizing patient safety, healthcare providers can build a more reliable and trustful healthcare system, ensuring that patients receive the highest standard of care with minimal risk of harm.

Future Implications for Healthcare Improvement

The findings from this study have several implications for future healthcare improvement. Firstly, the significant proportion of preventable adverse events indicates that there is substantial room for enhancing patient safety through targeted interventions. Healthcare providers should focus on areas with the highest preventability rates, such as therapeutic procedures and diagnostic processes, to develop specific strategies that address the root causes of these events. Implementing advanced technologies, such as electronic health records and diagnostic decision support systems, can improve accuracy and efficiency in patient care. Additionally, fostering a culture of safety and continuous improvement is crucial. Regular training programs, performance reviews, and feedback mechanisms can help healthcare staff stay updated with best practices and encourage proactive risk management.

Moreover, the study underscores the importance of multidisciplinary collaboration in healthcare. By promoting teamwork and communication among healthcare professionals, hospitals can ensure that patient care is coordinated and comprehensive, reducing the likelihood of errors. The implementation of patient safety protocols should be accompanied by rigorous monitoring and evaluation to assess their effectiveness and make necessary adjustments. Policymakers and healthcare administrators should also consider these findings when developing regulations and standards for patient safety, ensuring that healthcare facilities are equipped with the necessary resources and support to implement effective safety measures.

In conclusion, the study highlights the critical need for systematic improvements in patient safety protocols to reduce the incidence of adverse events and enhance the overall quality of care. By addressing the areas identified in this study, healthcare providers can create safer healthcare environments and achieve better patient outcomes. The insights gained from this research should inform future efforts to improve patient safety, ensuring that all patients receive safe, effective, and high-quality care.

RECOMMENDATIONS

Based on the findings of the preventability analysis, several recommendations can be made to improve patient safety and reduce the incidence of adverse events at the hospital. These recommendations are targeted at both therapeutic and diagnostic care, addressing specific areas with high preventability rates and evidence of significant risks.

1. **Enhance Incident Reporting Systems**:
    - Encourage a culture of transparency and accountability among healthcare staff to report all adverse events and near-misses. Implementing a robust incident reporting system can help identify patterns and underlying causes of adverse events, enabling targeted interventions and continuous improvement.
2. **Improve Surgical Safety Protocols**:
    - Adopt comprehensive surgical safety checklists and ensure their rigorous implementation in all surgical procedures. This includes preoperative briefings, intraoperative monitoring, and postoperative reviews to identify and mitigate potential risks at each stage of the surgical process.

3. **Strengthen Medication Safety Practices**:

    - Implement electronic prescribing systems to reduce medication errors and enhance accuracy in drug administration. Establish a double-check mechanism for high-risk medications and promote regular training for healthcare staff on safe medication practices.

4. **Enhance Diagnostic Accuracy and Timeliness**:

    - Utilize advanced diagnostic technologies and decision support tools to improve the accuracy and timeliness of diagnoses. Encourage collaborative case reviews and second opinions, partICUlarly for complex cases, to minimize diagnostic errors and delays.

5. **Improve Infection Control Measures**:

    - Strengthen infection control protocols, including strict adherence to hand hygiene practices, regular sterilization of medical equipment, and timely identification and isolation of infectious patients. Conduct regular audits and training sessions to ensure compliance with infection control guidelines.

6. **Implement Fall Prevention Programs**:

    - Conduct regular fall risk assessments for all patients and implement tailored fall prevention programs for high-risk individuals. This includes environmental modifications, patient education, and staff training to prevent falls and related injuries.

7. **Regular Maintenance and Calibration of Medical Equipment**:

    - Ensure that all medical equipment is regularly maintained and calibrated to prevent equipment-related failures. Train healthcare staff on the proper use and troubleshooting of medical devices to enhance their reliability and safety.

8. **Promote a Culture of Continuous Improvement**:

    - Foster a culture of continuous improvement by encouraging healthcare staff to participate in ongoing education and training programs. Implement regular performance reviews and feedback mechanisms to identify areas for improvement and recognize achievements in patient safety.

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BIBLIOGRAPHY

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ANNEXURE

PROFORMA

(Details of patient to be included)

CONFIDENTIAL

RF1: adverse event detection questionnaire

Reviewer

Reviewer ID number: ☐☐☐

Clinical department n°: ☐☐

Date of admission: ☐☐/☐☐/☐☐ (D D / M M / Y Y)

Time commenced review: ☐☐:☐☐ *(Use 24 hour clock)*

Time finished review: ☐☐:☐☐ *(Use 24 hour clock)*

Case number

Case number: ☐☐☐☐☐☐

Birth date: ☐☐/☐☐/☐☐ (D D / M M / Y Y)
(at least the year of birth)

Gender: ☐
1 = male
2 = female

Admission status: ☐
1 = elective
2 = acute
3 = do not know

Date of review: ☐☐/☐☐/☐☐ (D D / M M / Y Y)

Date of discharge: ☐☐/☐☐/☐☐ (D D / M M / Y Y)
(if known)

SCREENING CRITERIA

Please indicate for all of the below if the criteria are fulfilled and if so give details.

1. During the last 12 months, any unplanned ward admission related to any given healthcare for the same health condition? ☐ **Yes** ☐ **No**

2. Hospital-incurred patient accident or injury. ☐ **Yes** ☐ **No**

3. Adverse drug reaction/drug error or related to administration of fluids or blood ☐ **Yes** ☐ **No**

4. Hospital acquired infection/sepsis. ☐ **Yes** ☐ **No**

5. Unplanned removal, injury or repair of organ or structure during surgery, invasive procedure or vaginal delivery. ☐ **Yes** ☐ **No**

6. Unplanned return or visit to the operating theatre during this admission ☐ **Yes** ☐ **No**

7. Unplanned open surgery following closed or laparoscopic surgery. ☐ **Yes** ☐ **No**

8. Cardiac/respiratory arrest, low Apgar score. ☐ **Yes** ☐ **No**

9. Development of neurological deficit not present on admission ☐ **Yes** ☐ **No**

10. Injury or complications related to termination of pregnancy or labour and delivery including neonatal complications. ☐ **Yes** ☐ **No**

11. Other patient complications including MI, DVT, PE, CVA etc. ☐ **Yes** ☐ **No**

12. Patient/family dissatisfaction with care received documented or expressed during the current admission ☐ **Yes** ☐ **No**

13. Unplanned transfer from general care to intensive care / higher dependency. ☐ **Yes** ☐ **No**

14. Unplanned transfer to another acute care hospital ☐ **Yes** ☐ **No**

15. Unexpected death (i.e. not an expected outcome of the disease during hospitalisation) ☐ **Yes** ☐ **No**

16. Patients care delayed or lesser treatment given because the patient was unable to pay ☐ **Yes** ☐ **No**

17. Admission significantly prolonged compared to the expected length for this clinical condition. ☐ **Yes** ☐ **No**

18. Any other undesirable outcomes (not covered by any of the above) ☐ **Yes** ☐ **No**

Are any criteria present?: ☐ **Yes** ☐ **No,** (Then STOP; do not the second questionnaire)

If Yes, total number of criteria: ☐

If Yes, number of potential injury or complication: ☐

Short description of the potential injury or complication:

- Include all potential injuries or complications noted in the RF1 form.
- Complete one form for each potential injury or complication.
- If the patient has more than one, use two (or more) RF2 forms and quote "1 of 2" , "2 of 2", etc.

CONFIDENTIAL

(RF2 Form)

Reviewer ID number: ☐☐☐ **Case number:** ☐☐☐☐☐☐
(same number as in RF1)

Date of data collection: ☐☐/☐☐/☐☐ (D D / M M / Y Y)

Time commenced review: ☐☐:☐☐ *(Use 24 hour clock)*

Time finished review: ☐☐:☐☐ *(Use 24 hour clock)*

Q1 & Q2 **HI No** ☐ **out of a total of** ☐ **HI**

Brief description of the harmful incident:

Information sources used

Q3 Physician ..... **1** = Yes **2** = No ☐

Q4 Head Nurse ..... **1** = Yes **2** = No ☐

Q5 Nurse ..... **1** = Yes **2** = No ☐

Q6 Medical record ..... **1** = Yes **2** = No ☐

Q7 Nursing notes ..... **1** = Yes **2** = No ☐

Q8 Other source ..... **1** = Yes **2** = No ☐

Q9 *Did the patient experience any unintended injuries or complications?* ..... **1** = Yes **2** = No ☐

The questionnaire is complete if answer is *No*.

Q10 *Clinical summary of the case and description of the harmful incident*

Main disease causing the admission:

Known comorbidities:

History of disease (in particular specify if the disease was known before admission):

Main events during hospitalization:

Harmful incident: (briefly answer the following "what, who, when, where, how" questions)
(Give any relevant laboratory/imaging results) **continue on back if needed:**

Harmful incident determination

SEVERITY

Q11 Did the injury or complication cause the admission to the ward? **1** = Yes **2** = No

Q12 Is the injury or complication associated with death of the patient? **1** = Yes **2** = No

Q13 Is the injury or complication expected to be associated with disability/ deficit at the time of discharge from the ward? **1** = Yes **2** = No

Q14 Is the injury or complication expected to be associated with prolonged ward stay? **1** = Yes **2** = No

The questionnaire is complete if the answer to all four items is *No*.

CAUSATION

Q15 *In your best judgement, is there evidence that health care management caused the harmful incident? In answering this question, consider, when relevant, the following questions and complete the appropriate boxes.*

Q15.1 Could the event be expected, given the disease or the health status of the patient? **1** = Yes **2** = No **3** = Don't know

Q15.2 Are there indications that health care management caused the injury? **1** = Yes **2** = No **3** = Don't know

Q15.3 Does the timing of events suggest that the injury was related to the treatment or lack of treatment? **1** = Yes **2** = No **3** = Don't know

Q15.4 Are there other reasonable explanations for the event? **1** = Yes **2** = No **3** = Don't know

Q15.5 Was there an opportunity prior to the occurrence of the injury for intervention which might have prevented it? **1** = Yes **2** = No **3** = Don't know

Q15.6 Was the unintended injury or complication recognised during the current admission? **1** = Yes **2** = No

Q15.7a Was appropriate action taken? **1** = Yes **2** = No **3** = N/A

Q15.7b Did the unintended injury or complication respond to the appropriate action?
1 = Yes **2** = Probably **3** = Too early to know **4** = No **5** = Don't know **6** = N/A

Consider all of the above questions above before continuing.

Q16 *After due consideration of the clinical details of the patient's management, **irrespective of preventability**, what level of confidence do you have that the HEALTH CARE MANAGEMENT caused the injury?*

Confidence Score:
1 = Virtually no evidence of management causation (Then STOP, no HI)
2 = Slight to moderate evidence for management causation (Then STOP, no HI)
3 = Management causation not likely; less than 50-50 (Then STOP, no HI)
4 = Management causation more likely than not, more than 50-50
5 = Moderate/strong evidence of management causation
6 = Virtually certain evidence of management causation

Score:

The questionnaire is complete if your score is three or less.

Q17 *Location of occurrence*

Q17.1 Where did the health care management causing the HI occur? (choose one) **1** = outside this hospital **2** = inside this hospital

If 1, proceed with Q17.2 and Q19
If 2, proceed to Q17.3

Q17.2 If outside this hospital

1 = Public hospital
2 = Private hospital
3 = Home with professional health-care management
4 = Home without professional health-care management
5 = Nursing home
6 = Primary health care facility outside this hospital/family practice
7 = other

Q17.3 If the HI occurred inside this hospital, was it in the clinical unit where the data collection is currently taking place? **1** = Yes **2** = No

Q17.4 Specify the clinical unit in which the HI occurred

SURGERY

01 = Cardiac Surgery
02 = Colon/Rectal Surgery
03 = General Surgery
04 = Orthopaedic Surgery
05 = Paediatric Surgery
06 = Plastic Surgery
07 = Thoracic Surgery
08 = Urological Surgery
09 = Vascular Surgery
10 = Neurosurgery
11 = Obstetrics
12 = Ophthalmology
13 = ENT
14 = Stomatology

MEDICINE

15 = Cardiology
16 = Dermatology
17 = Endocrinology
18 = Gastroenterology
19 = Geriatrics
20 = Gynecology
21 = Hematology
22 = Immunology and Allergy
23 = Infectious Disease
24 = Internal Medicine (not otherwise classified)
25 = Physical Medicine
26 = Neonatology
27 = Nephrology
28 = Neurology
29 = Medical Oncology
30 = Paediatrics
31 = Pulmonary Disease
32 = Psychiatry
33 = Medical Intensive Care Unit
34 = Rheumatology
35 = A&E
36 = Other

Q18 *Where exactly?*

INSIDE HOSPITAL

01 = Theaters
02 = Recovery Room
03 = ICU
04 = Catheterization, endoscopic unit
05 = Consultation, outpatients clinic
06 = Therapy/Rehabilitation
07 = Patient's room
08 = Labor and Delivery
09 = Radiology
10 = A&E
11 = Service Area (stairs, halls, elevator)
12 = Other site in hospital
13 = Don't know

Q19 *Classification of harmful incident*

Q19.1 To which type of care management was the harmful incident mainly related?
1 = prevention or prophylaxis **2** = diagnosis **3** = therapeutic **4** = rehabilitation ☐

Q19.2 What was the main cause of HI (the most important one) ☐
1 = Error in the choice of management
2 = Delay in management implementation (including no implementation at all)
3 = Error during management implementation
4 = Other (mainly unavoidable events)
5 = Don't know

Q19.3 Was the HI related to a procedure? **1** = Yes **2** = No ☐

If no proceed to Q19.4

Q19.3a If yes, which procedure? ☐☐

1 = Surgery
2 = Anesthesiology
3 = Surgical intervention during radiology
4 = Radiology using contrast product
5 = Endoscopy
6 = Biopsy
7 = Puncture or tapping
8 = Catheter, perfusion or injection
9 = Urinary catheter
10 = Gastric
11 = Intubation
12 = Dialysis
13 = Radiotherapy
14 = Instrument assisted delivery
15 = Physiotherapy
16 = Other

Q19.4 Was the HI related to a substance or health product? **1** = Yes **2** = No ☐

If no proceed to Q20

Q19.4a If yes, which product? ☐☐

1 = drug
2 = blood product
3 = medical device
4 = equipment (laser, diathermy...)
5 = Dietetic product
6 = Local preparation (e.g. chemotherapy product…)
7 = Other

Q20 *Patient-related contributing factors?*

Q20.1 Patient's global health status and disease **1** = Yes **2** = No ☐

Q20.2 Patient's behaviour **1** = Yes **2** = No ☐

Q20.3 Patient unable to afford correct recommended care **1** = Yes **2** = No ☐

Q20.4 Family's behaviour **1** = Yes **2** = No ☐

Q20.5 Other **1** = Yes **2** = No ☐
(Specify) _____

Q21 *System-related contributing factors?*

Q21.1	inadequate or defective premises	**1** = Yes	**2** = No	
Q21.2	equipment or supplies not available or defective	**1** = Yes	**2** = No	
Q21.3	inadequate staffing at the time of the HI (not merely in terms of numbers, take account of balance among different competences and experience, in particular at weekends and during holidays)	**1** = Yes	**2** = No	
Q21.4	recent organizational changes inside the unit	**1** = Yes	**2** = No	
Q21.5	defective coordination inside the unit	**1** = Yes	**2** = No	
Q21.6	inadequate reporting or communication	**1** = Yes	**2** = No	
Q21.7	inadequate training or supervision of doctors or other personnel	**1** = Yes	**2** = No	
Q21.8	delay in the provision or scheduling of services (e.g. lab tests, x-rays or follow-up visits)	**1** = Yes	**2** = No	
Q21.9	failure to implement protocol or plan	**1** = Yes	**2** = No	
Q22	*Inadequate monitoring of patient*	**1** = Yes	**2** = No	
Q22.1	inadequate discharge procedure	**1** = Yes	**2** = No	
Q22.2	defective coordination between the unit and other units (e.g. pharmacy, blood bank or catering)	**1** = Yes	**2** = No	
Q22.3	no protocol/health care policy	**1** = Yes	**2** = No	
Q22.4	other	**1** = Yes	**2** = No	

Describe the most important contributing factor to the harmful incident

Q23 *Preventability*

Consider and evaluate the following questions before making a judgement on preventability.

Q23.1 How serious was the clinical condition of the patient PRIOR to the occurrence of the HI?

1 = very serious **2** = moderately serious **3** = not very serious **4** = not serious ☐

Q23.2 How complex was the clinical condition (co-morbidity, global health status)?

1 = very complex **2** = moderately complex **3** = not very complex **4** = uncomplicated ☐

Q23.3 What was the degree of urgency in the management of the case prior to the occurrence of the harmful incident?

1 = critical and very urgent **2** = moderate **3** = low **4** = not urgent ☐

Q23.4 Was the choice of actual management of the disease appropriate?

1 = definitely **2** = probably **3** = probably not **4** = inappropriate **5** = do not know ☐

If Q23.4 is 3, 4 or 5 (wrong choice or omission) go to Q23.6.

Q23.5 If the choice was appropriate, was there a deviation in the implementation of the intended management?

1 = none **2** = slight deviation **3** = moderate deviation **4** = marked deviation **5** = do not know ☐

Q23.6 What was the likelihood of benefits associated with the actual management of the disease which led to the HI?

1 = high **2** = moderate **3** = low **4** = absent ☐

Q23.7 What was the risk associated with the actual management of the disease which led to the HI?

1 = virtually absent **2** = low **3** = moderate **4** = high ☐

Q23.8 On reflection, would a reasonable doctor or health professional have managed the care in a similar manner?

1 = definitely would have **2** = probably would have **3** = probably would not have **4** = definitely would not have ☐

Consider all of questions 23.1-23.8 above before continuing

Q24 *Rate on a 6-point scale your confidence in the evidence for preventability.*

Confidence Score:
1 = Virtually no evidence for preventability
2 = Slight to modest evidence for preventability
3 = Preventability not really likely; less than 50-50
4 = Preventability more likely than not; more than 50-50
5 = Strong evidence for preventability
6 = Definite certain evidence for preventability

Score:

Q25 *Please describe how the harmful incident could have been prevented*

SANTOSH DEEMED TO BE UNIVERSITY (GHAZIABAD)

PERMISSION LETTER

To,

The Head Of Department,

Department of Hospital Administration,

Santosh Deemed to be University

Ghaziabad 201001 (UP)

Subject: Permission to change the place of study from Santosh Medical College and Hospital to SJM SUper Speciality Hospital for MHA dissertation work.

Respected Sir,

I am writing to formally request permission to change the place of my research study from Santosh Hospital to SJM Super Speciality Hospital, Noida as SJM Super Speciality Hospital is best suited for my study for data collection. As a student of MHA final year at Santosh Medical College and Hospital, I am keen to contribute to the advancement of medical knowledge and patient care through rigorous research endeavours.

The proposed research study, titled " *Patient Safety with Reference to The Adverse Events on The Basis of Incident Reporting at a Private Tertiary Care Hospital in North India*," aims to examine the categories and rates of adverse events.

I assure you that this study will adhere strictly to all ethical guidelines and regulations governing research practices within healthcare institutions. Additionally, the confidentiality of patient information will be maintained at all times, and appropriate measures will be taken to ensure data security.

In order to proceed with this research, I kindly request to grant permission for the same.

Sincerely,

Manisha Singh

MHA 2ND Year

Santosh Medical College and

Hospital Ghaziabad 201001 (UP)

approved

Dr. MANISH SABHARWAL
Director Medical
Santosh Medical College & Hospital
Ghaziabad-201001 (U.P.)

To,

The Medical Superintendent

SJM Super Speciality Hospital

Noida 201307 (UP)

Subject: Permission to conduct a research study for the completion of dissertation work.

Respected Sir,

I am writing to formally request permission to conduct a research study within SJM Super Speciality Hospital, Noida. As a student of MHA final year at Santosh Medical College and Hospital, I am keen to contribute to the advancement of medical knowledge and patient care through rigorous research endeavours.

The proposed research study, titled " Patient Safety with Reference to The Adverse Events on The Basis of Incident Reporting at a Private Tertiary Care Hospital in North India," aims to examine the categories and rates of adverse events.

I assure you that this study will adhere strictly to all ethical guidelines and regulations governing research practices within healthcare institutions. Additionally, the confidentiality of patient information will be maintained at all times, and appropriate measures will be taken to ensure data security.

In order to proceed with this research, I kindly request to grant permission for the same.

Sincerely,

Manisha Singh

MHA 2ND Year

Santosh Medical College and Hospital

Ghaziabad

SJM SUPER SPECIALITY HOSPITAL
Dr. Pushpa Kaul
MBBS, MD (Obst. & Gynae)
Sr. Consultant Gynaecologist
Reg. No. 51839(UPMC)

SJM SUPER SPECIALITY HOSPITAL NOIDA

3/4/24

LETTER OF ETHICAL CLEARANCE FOR DISSERTATION FROM REGISTRAR OFFICE

SANTOSH
Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

F. No. SU/R/2024/1344[27] Dated: 17.05.2024

Subject: Grant of Ethical Clearance for **Dissertation Protocol** Topic **"Patients Safety With Ref. to the Adverse Events on the Basis of Incident Reporting at Private Tertiary Care Hospital",** submitted by **MANISHA SINGH,** student of Master in Hospital Administration, 2022 Batch.

*****

With reference to the request for grant of Ethical Clearance for the Dissertation Protocol entitled **"Patients Safety With Ref. to the Adverse Events on the Basis of Incident Reporting at Private Tertiary Care Hospital"**, **MANISHA SINGH** is informed that the **Dissertation Protocol** submitted by him/her was considered by the **Screening Committee** of the **Allied Health Sciences** in its meetings held on 07.02.2024 and 29.02.2024. The recommendations of the **Screening Committee** were considered in detail by the **Institutional Ethics Committee** in its meeting held on **15.05.2024** and the same was **approved** by the **Ethics Committee** of the **Santosh Deemed to be University, Ghaziabad, Delhi NCR.**

He /She is informed accordingly for further necessary action.

17/5/24

[Dr. EZHILRAJAN. K]
REGISTRAR

SANTOSH DEEMED TO BE UNIVERSITY REGISTRAR GHAZIABAD, NCR DELHI

MANISHA SINGH
Master in Hospital Administration.

Copy to:

1. The Vice Chancellor
2. The Dean – Academics
3. The Dean, SMC&H
4. The Dean – Research
5. The Director - IQAC
6. HOD/ Course In-charge of the concerned Department.

SANTOSH DEEMED TO BE UNIVERSITY (GHAZIABAD)

STATISTICIAN CERTIFICATE

SANTOSH
Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

CENTER FOR INTERDISCIPLINARY RESEARCH AND INNOVATION

To Whom It May Concern

This is to certify that the Post-Graduate Dissertation entitled " **Patient safety with reference to the Adverse Events on the basis of incident reporting at a private tertiary care hospital in north India"** by **Ms. Manisha Singh**, Department of Hospital Administration (MHA), (Batch-2022-24) has been carefully assessed and authenticated by the Assistant Prof Cum Biostatistician of Santosh Deemed to be University

This certification is sound based on the examination and review conducted by the Biostastician, confirming adherence to statistical prices and practices

Date: 5/8/2024

Signature:

Dr. Amod Kumar

(Assistant Professor cum Bio-Statistician)

Department of Community Medicine,

Santosh Deemed to be University

Delhi (NCR)

S

PLAGIARISM REPORT

PATIENT SAFETY WITH REFERENCE TO THE ADVERSE EVENTS ON THE BASIS OF INCIDENT REPORTING AT A PRIVATE TERTIARY CARE HOSPITAL IN NORTH INDIA.

ORIGINALITY REPORT

5%
SIMILARITY INDEX

PRIMARY SOURCES

1	mail.scopemed.org Internet	22 words — 2%
2	careersdocbox.com Internet	18 words — 2%

EXCLUDE QUOTES	ON	EXCLUDE SOURCES	< 10 WORDS
EXCLUDE BIBLIOGRAPHY	ON	EXCLUDE MATCHES	< 14 WORDS

MASTER CHART ((Demographic Data)

MR.No	IP No	Age	Gender	Specialty	TYPE OF ADMISSION
98174	15504	22 YRS	Female	Obs. & Gynae.	Emergency
98108	15492	30 YRS	Female	General Surgery	Elective
94998	15511	40 YRS	Female	Obs. & Gynae.	Elective
98361	15539	37 YRS	Male	General Surgery	Elective
98372	15545	8 DAYS(S)	Male	Pediatrics	Elective
98398	15548	25 YRS	Male	Medicine	Elective
98445	15556	19 YRS	Male	Orthopedics	Emergency
53138	15559	42 YRS	Female	Plastic Surgery	Elective
98471	15562	5 YRS	Male	Pediatrics	Emergency
98527	15565	26 YRS	Female	Obs. & Gynae.	Elective
98549	15568	36 YRS	Male	General Surgery	Elective
98669	15594	31 YRS	Female	Medicine	Elective
98886	15642	36 YRS	Female	Medicine	Elective
98948	15652	28 YRS	Female	Obs. & Gynae.	Elective
98972	15659	49 YRS	Female	Medicine	Elective
99077	15678	24 YRS	Female	Obs. & Gynae.	Emergency
92632	15676	37 YRS	Female	Obs. & Gynae.	Elective
99094	15684	21 YRS	Female	Obs. & Gynae.	Elective
99185	15697	58 YRS	Male	Orthopedics	Emergency
94170	15717	37 YRS	Female	Obs. & Gynae.	Elective
98279	15746	22 YRS	Female	Obs. & Gynae.	Elective
98974	15747	46 YRS	Female	General Surgery	Elective
99501	15759	20 YRS	Female	Plastic Surgery	Emergency
99512	15762	38 YRS	Male	Medicine	Elective
99646	15783	33 YRS	Female	Obs. & Gynae.	Elective
98860	15789	28 YRS	Female	Obs. & Gynae.	Elective
99687	15793	5 YRS	Female	Pediatrics	Emergency
99764	15815	60 YRS	Male	Medicine	Emergency
86663	15821	15 YRS	Male	Medicine	Elective
93614	15827	35 YRS	Female	Obs. & Gynae.	Elective
94543	15855	40 YRS	Female	Obs. & Gynae.	Elective
93256	15849	23 YRS	Female	Obs. & Gynae.	Elective
80404	15875	58 YRS	Female	Medicine	Elective
100042	15876	46 YRS	Female	Medicine	Elective

100079	15886	68 YRS	Male	Medicine	Elective
100161	15915	55 YRS	Female	Medicine	Elective
96211	16010	38 YRS	Female	Obs. & Gynae.	Elective
71119	16087	33 YRS	Female	Obs. & Gynae.	Elective
94406	15914	29 YRS	Female	Obs. & Gynae.	Elective
101193	16118	31 YRS	Female	Medicine	Elective
101279	16189	33 YRS	Female	Orthopedics	Emergency
101509	16191	1 DAYS(S)	Female	Pediatrics	Elective
101927	16265	34 YRS	Male	Medicine	Elective
102270	16339	31 YRS	Male	Medicine	Elective
101523	16348	42 YRS	Female	Obs. & Gynae.	Emergency
86263	16353	70 YRS	Female	Medicine	Emergency
102600	16391	46 YRS	Male	Medicine	Elective
102631	16399	58 YRS	Female	Medicine	Elective
96419	16458	23 YRS	Female	Obs. & Gynae.	Elective
25642	16523	32 YRS	Female	Obs. & Gynae.	Emergency
104088	16664	50 YRS	Female	Obs. & Gynae.	Elective
104325	16709	19 YRS	Male	General Surgery	Elective
104481	16735	1 DAYS(S)	Male	Pediatrics	Elective
104477	16734	38 YRS	Female	Medicine	Elective
105170	16862	41 YRS	Female	Obs. & Gynae.	Elective
105427	16908	37 YRS	Female	General Surgery	Elective
105489	16924	32 YRS	Male	Medicine	Elective
105866	16974	34 YRS	Male	Medicine	Elective
106730	17119	35 YRS	Female	Obs. & Gynae.	Elective
107156	17213	37 YRS	Female	Obs. & Gynae.	Elective
107719	17328	62 YRS	Female	Medicine	Emergency
108103	17389	29 YRS	Male	Medicine	Elective
108311	17424	63 YRS	Female	General Surgery	Emergency
108428	17448	24 YRS	Female	Medicine	Elective
108985	17553	26 YRS	Female	Obs. & Gynae.	Elective
109084	17570	25 YRS	Female	Obs. & Gynae.	Elective
109249	17595	28yrs	Female	Medicine	Elective
109090	17571	24yrs	Female	Medicine	Elective
109101	17574	22yrs	Female	Medicine	Elective
109267	17597	26yrs	Male	Medicine	Elective
109373	17634	27yrs	Female	Medicine	Elective
109589	17683	34yrs	Female	Medicine	Elective

RF -1 Form filled Data

IPNo	During the last 12 months, any unplanned ward admission related to any given healthcare for the same health condition?	Hospital-incurred patient accident or injury.	Adverse drug reaction/drug error or related to administration of fluids or blood	Hospital acquired infection/sepsis.	Unplanned removal, injury or repair of organ or structure during surgery, invasive procedure or vaginal delivery.	Unplanned return or visit to the operating theatre during this admission	Unplanned open surgery following closed or laparoscopic surgery.	Cardiac/respiratory arrest, low Apgar score.	Development of neurological deficit not present on admission	Injury or complications related to termination of pregnancy or labour and delivery including neonatal complications	Other patient complications including MI, DVT, PE, CVA etc.	Patient/family dissatisfaction with care received documented or expressed during the current admission	Unplanned transfer from general care to intensive care / higher dependency.	Unplanned transfer to another acute care hospital	Unexpected death	Patients care delayed or lesser treatment given	Admission significantly prolonged compared to the expected length for this clinical condition.	. Any other undesirable outcomes (not covered by any of the above)
15504	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	NO
15492	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
15511	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
15539	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15545	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
15548	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15556	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15559	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	NO
15562	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	NO
15565	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	NO
15568	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO

15594	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
15642	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
15652	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15659	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
15678	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15676	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
15684	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15697	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
15717	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15746	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15747	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	NO
15759	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	NO
15762	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15783	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
15789	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
15793	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15815	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15821	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15827	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO

15855	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
15849	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
15875	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15876	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15886	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15915	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16010	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16087	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
15914	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
16118	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	NO
16189	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
16191	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
16265	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16339	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
16348	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
16353	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16391	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16399	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16458	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO

16523	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16664	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
16709	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16735	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
16734	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16862	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16908	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16924	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
16974	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17119	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
17213	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
17328	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
17389	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	NO
17424	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17448	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17553	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
17570	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
17595	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17571	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

17574	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17597	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17634	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17683	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

RF- 2 Form filled Data

Patient Name	Age	Gender	Speciality	Information Sources Used	Harmful Incident Determination	Causation	Evidence	Location Of Occurrence	Classification Of Harmful Incident	Preventability	Evidence Of Preventability
KESHAV KARTHIKAN	19 YRS	MALE	Orthopaedics	Doctor	Admission To Ward	Not Caused	No Evidence	Outside Of Hospital	Diagnosis	Non-Preventable	3
ANITA	24 YRS	FEMALE	Obs. & Gynae.	Doctor	Prolonged Ward Stay	Caused	Less Than 50-50	In Hospital (Ward)	Preventive	Preventable	6
HIMANSHU SHARMA	19 YRS	MALE	General Surgery	Doctor	Admission To Ward	Not Caused	No Evidence	Outside Of Hospital	Diagnosis	Non-Preventable	3
SHIVCHAND SAH	25 YRS	MALE	Medicine	Head Nurse	None	Caused	More Likely 50-50	Ward	Preventive	Preventable	5
AMAN KUMAR	5 YRS	MALE	Pediatrics	Doctor	None	Caused	Less Than 50-50	Ward	Preventive	Preventable	5

RAJ KUMAR RAUT	36 YRS	MALE	General Surgery	Doctor	Prolonged Ward Stay	Caused	More Likely 50-50	Ot	Preventive	Preventable	5
JYOTI KUMARI	21 YRS	FEMALE	Obs. & Gynae.	Head Nurse	None	Caused	More Likely 50-50	Ward	Preventive	Preventable	5
SNEHA	20 YRS	FEMALE	Plastic Surgery	Head Nurse	None	Caused	Less Than 50-50	Emergency	Preventive	Preventable	3
RAJESH	46 YRS	MALE	Medicine	Head Nurse	None	Caused	Less Than 50-50	Emergency	Preventive	Preventable	5
NISHA	37 YRS	FEMALE	General Surgery	Other Source	Prolonged Ward Stay	Caused	More Likely 50-50	Ot	Preventive	Preventable	5
SUSHILA	63 YRS	FEMALE	General Surgery	Doctor	Prolonged Ward Stay	Caused	More Likely 50-50	Ot	Preventive	Preventable	5
AYESHA	22 YRS	FEMALE	Obs. & Gynae.	Head Nurse	None	Caused	Strong Evidence	Ward	Preventive	Preventable	6
POOJA	31 YRS	FEMALE	Medicine	Doctor	Prolonged Ward Stay	Not Caused	No Evidence	Ward	Therapeutic	Preventable	1
SAVITA	28 YRS	FEMALE	Obs. & Gynae.	Head Nurse	None	Caused	Strong Evidence	ICU	Preventive		6

SURENDER JHA	68 YRS	MALE	Medicine	Nurse	Prolonged Ward Stay	Not Caused	Slightly Evident	Ward	Therapeutic	Non-Preventable	6
SHAMBHUNATH JHA	58 YRS	FEMALE	Medicine	Nurse	Prolonged Ward Stay	Not Caused	Less Than 50-50	Ward	Therapeutic	Non-Preventable	6
AMEER JAHAN	50 YRS	FEMALE	Obs. & Gynae.	Nurse	Prolonged Ward Stay	Not Caused	No Evidence	Ward	Therapeutic	Non-Preventable	6
MUKESH KUMAR	34 YRS	MALE	Medicine	Doctor	None	Caused	Strong Evidence	ICU	Preventive	Preventable	1
PRAYAGI DEVI	62 YRS	FEMALE	Medicine	Doctor	Prolonged Ward Stay	Not Caused	No Evidence	Ward	Therapeutic	Non-Preventable	6
POOJA GAUTAM	24 YRS	FEMALE	Medicine	Head Nurse	None	Caused	Virtually Certain	ICU	Preventive	Preventable	2
AMIT KUMAR TYAGI	37 YRS	MALE	General Surgery	Doctor	Prolonged Ward Stay	Caused	More Likely 50-50	Ward	Diagnosis	Can Preventable	5
KESHAV KARTHIKAN	19 YRS	MALE	Orthopaedics	Doctor	Admission To Ward	Not Caused	Slightly Evident	Ward	Diagnosis	Non-Preventable	2

ANITA	24 YRS	FEMALE	Obs. & Gynae.	Head Nurse	Admission To Ward	Not Caused	Slightly Evident	Ward	Diagnosis	Non-Preventable	2
RAJWATI DEVI	70 YRS	FEMALE	Medicine	Doctor	Prolonged Ward Stay	Not Caused	Less Than 50-50	Ward	Diagnosis	Non-Preventable	3
HIMANSHU SHARMA	19 YRS	MALE	General Surgery	Doctor	Admission To Ward	Not Caused	Slightly Evident	Ward	Diagnosis	Non-Preventable	2
MEENAKSHI VARSHNEY	38 YRS	FEMALE	Medicine	Doctor	Prolonged Ward Stay	Caused	Virtually Certain	Ward	Diagnosis	Can Preventable	3
MAMTA YADAV	41 YRS	FEMALE	Obs. & Gynae.	Head Nurse	Prolonged Ward Stay	Caused	Strong Evidence	Ward	Diagnosis	Can Preventable	5
NEHA SRIVASTAVA	33 YRS	FEMALE	Obs. & Gynae.	Doctor	Prolonged Ward Stay	Caused	Virtually Certain	Labor Room	Therapeutic	Can Preventable	5
AYESHA	22 YRS	FEMALE	Obs. & Gynae.	Other Source	None	Caused	Strong Evidence	Ward	Preventive	Preventable	6
DURGESH NANDINI	40 YRS	FEMALE	Obs. & Gynae.	Other Source	None	Caused	Slightly Evident	Ward	Preventive	Preventable	5

SHILKI SAINI	8 DAYS(S)	MALE	Pediatrics	Other Source	None	Caused	Strong Evidence	NICU	Preventive	Preventable	5
PUSHPA DEVI	42 YRS	FEMALE	ENT	Other Source	None	Caused	Less Than 50-50	Ward	Preventive	Preventable	4
AMAN KUMAR	5 YRS	MALE	Pediatrics	Other Source	None	Caused	Less Than 50-50	Ward	Preventive	Preventable	
ANUPRIYA KUMARI	26 YRS	FEMALE	Obs. & Gynae.	Other Source	None	Caused	Strong Evidence	Ward	Preventive	Preventable	6
RAJ KUMAR RAUT	36 YRS	MALE	General Surgery	Other Source	Prolonged Ward Stay	Caused	More Likely 50-50	Ot	Preventive	Can Preventable	5
ARVIND KALSI	58 YRS	MALE	Orthopedics	Other Source	None	Caused	Slightly Evident	Ward	Preventive	Preventable	2
SUNAINA DEVI	46 YRS	FEMALE	General Surgery	Other Source	None	Caused	Less Than 50-50	Ward	Preventive	Preventable	4
SNEHA	20 YRS	FEMALE	Plastic Surgery	Other Source	None	Caused	Less Than 50-50	Emergency	Preventive	Preventable	3
GEETA NAGAR	40 YRS	FEMALE	Obs. & Gynae.	Other Source	None	Caused	More Likely 50-50	Ward	Preventive	Preventable	4
KAMLESH KUMARI	31 YRS	FEMALE	Medicine	Other Source	None	Caused	Strong Evidence	Ward	Preventive	Preventable	1

REENA	42 YRS	FEMALE	Obs. & Gynae.	Other Source	None	Caused	Strong Evidence	Ward	Preventive	Preventable	6
ANSHU BHATI	23 YRS	FEMALE	Obs. & Gynae.	Other Source	None	Caused	Slightly Evident	Ward	Preventive	Preventable	5
SAVITA	35 YRS	FEMALE	Obs. & Gynae.	Other Source	None	Caused	Slightly Evident	Ward	Preventive	Preventable	5
SARITA SHARMA	37 YRS	FEMALE	Obs. & Gynae.	Other Source	None	Caused	Slightly Evident	Ward	Preventive	Preventable	6
BABLU	29 YRS	MALE	Medicine	Other Source	Prolonged Ward Stay	Not Caused	Virtually Certain	Ward	Preventive	Non-Preventable	3
KIRAN HALDAR	26 YRS	FEMALE	Obs. & Gynae.	Other Source	None	Caused	More Likely 50-50	Ward	Preventive	Preventable	4
BHUMIKA YADAV	25 YRS	FEMALE	Obs. & Gynae.	Other Source	None	Caused	Slightly Evident	Ward	Preventive	Preventable	5
ANAMIKA	1 DAYS(S)	FEMALE	Pediatrics	Doctor	Prolonged Ward Stay	Not Caused	No Evidence	NICU	Therapeutic	Non-Preventable	1
AMIT KUMAR SHARMA	31 YRS	MALE	Medicine	Doctor	Prolonged Ward Stay	Not Caused	No Evidence	ICU	Therapeutic	Non-Preventable	2
NAGMA KHANAM	1 DAYS(S)	MALE	Pediatrics	Doctor	Prolonged Ward Stay	Not Caused	No Evidence	NICU	Therapeutic	Non-Preventable	1

PRAYAGI DEVI	62 YRS	FEMALE	Medicine	Head Nurse	Prolonged Ward Stay	Not Caused	No Evidence	ICU	Therapeutic	Non-Preventable	2
REEMA	23 YRS	FEMALE	Obs. & Gynae.	Head Nurse	None	Caused	More Likely 50-50	Ward	Preventive	Preventable	1
SHALINI VERMA	29 YRS	FEMALE	Obs. & Gynae.	Nurse	None	Caused	More Likely 50-50	Ward	Preventive	Preventable	2
KAMLESH KUMARI	31 YRS	FEMALE	Medicine	Nurse	None	Caused	Strong Evidence	Ward	Preventive	Preventable	1
SONI BEGAM	33 YRS	FEMALE	Orthopaedics	Head Nurse	Prolonged Ward Stay	Caused	Virtually Certain	ICU	Preventive	Can Preventable	3
AMEER JAHAN	50 YRS	FEMALE	Obs. & Gynae.	Head Nurse	None	Caused	Virtually Certain	Ward	Preventive	Preventable	2
BABLU	29 YRS	MALE	Medicine	Doctor	Prolonged Ward Stay	Not Caused	Virtually Certain	Ward	Preventive	Non-Preventable	3